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TAIWAN AND COVID-19

GLOBAL PRESSURE, DOMESTIC SUCCESS

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Any essay on COVID-19 that attempts to discern policy responses and reflect upon choices, as the worst pandemic in over 100 years still rages, demands of authors genuine humility, and hopefully what follows honors this obligation. Taiwan's (Republic of China) actions began before the pandemic and since its advent are arguably the world's most effective to date. Microsoft founder and philanthropist Bill Gates effusively praised Taiwan in an April 5, 2020 interview with *Fox News* host Chris Wallace stating, "I don't think any country has a perfect record. Taiwan comes close." Taiwan's success in managing the pandemic was widely reported in Asian, European, and American media as Taiwan garnered more positive global attention because of COVID-19 policies than has been the case for years.¹

Gates' comment in early spring 2020 was based upon responses to the virus the Taiwanese government had already implemented. Current comparative country data illustrates Taiwan's continued success (Table 1 with select country statistics). Taiwan's gross domestic product (GDP) growth of 3.3% reported on October 30, 2020 makes Taiwan one of the few major world economies to expand this year. This statistic demonstrates that economic recovery comes hand-in-hand with an effective pandemic response. Taiwan's robust high-tech sector including the Taiwan Semiconductor Manufacturing Company (TSMC), the world's largest

Country	National Population	Number of Confirmed COVID-19 Cases	Percent of Population Infected	Total Deaths	Case Fatality Rate (CFR)
Taiwan	23,834,802	675	0.003%	7	1.0%
Australia	25,625,435	27,904	0.109%	908	3.3%
People's Republic of China	1,441,655,170	92,890	0.006%	4,743	5.1%
United States	331,819,261	13.39 million	4.034%	266,877	2.0%
Germany	83,896,205	1,059,755	1.263%	16,312	1.5%
Japan	126,315,717	148,154	0.117%	2,067	1.4%

Table 1: Select Country Statistics on COVID-19 Cases

All data are from November 30, 2020.

Population data from: <https://www.worldometers.info>.

Additional data from: <https://coronavirus.jhu.edu/map.html>.

Note: CFR is the percentage of deaths among confirmed COVID-19 cases.

semiconductor contract manufacturer, are doing well, and most Taiwanese, because of the success in fighting COVID-19, are now going about life as usual.² Taiwan's situation is definitively unique compared to any other country because the Taiwanese have managed to be highly successful in managing the COVID-19 pandemic thus far while subject to unremitting Chinese pressure and World Health Organization (WHO) barriers faced by no other polity.

Although the 2002–2004 Severe Acute Respiratory Syndrome (SARS) killed far fewer people than expected, Taiwan had the third largest number of deaths from SARS with 73, behind only the People's Republic of China (PRC) and Canada.³ Taiwan, like many nations, was unprepared for the virus which originated in China and then through human contact came to Taiwan. Unlike other countries, Taiwan was handicapped in addressing the problem because of PRC policies and lack of prompt access to the WHO and the World Health Assembly (WHA), the WHO's decision-making body attended by delegates from all WHO member states.

The PRC has consistently claimed that Taiwan, who was expelled from the United Nations in 1971 when China was also formally recognized by the organization, is a Chinese province and not an independent state and that only the PRC can represent China. Because of its big power status, including a permanent seat on the UN Security Council, the PRC has imposed its “One China Principle” on most of the world. Although China insists that other nations and international organizations follow this policy, most countries, including the United States, have their own “One China Policy.” The U.S. view is expressed in the 1972 Shanghai Communiqué stating, “The United States acknowledges that all Chinese on either side of the Taiwan Strait maintain there is but one China and that Taiwan is a part of China. The United States Government does not challenge that position.” The key tenet of the U.S. position is that the United States “acknowledges” the Chinese perspective; it does not “recognize” the PRC perspective.⁴

Since 1971, Taiwan has been barred from membership in UN-affiliated organizations, even though in 2020, despite the PRC’s protestations, 15 nations—predominantly located in Latin America, the Caribbean, and Pacific regions—formally recognize Taiwan, and the country has a national government, county and municipal governments, and a standing military—typical characteristics of states as defined by international law.⁵ Taiwan also enjoys strong informal ties with a number of countries across North America, Asia, and Europe.

After the SARS virus arrived in Taiwan in early 2003, Taiwan’s SARS crisis was worsened by a 50-day delay on the part of the WHO, despite Taipei’s requests for assistance. Taiwan, with the assistance of formal diplomatic allies and other concerned nations, had been campaigning to attend WHA meetings and for a “universal application” clause in the revision of UN International Health Regulations (IHR), but PRC representatives blocked these efforts by insisting that the IHR applied to all “Chinese Territory,” including Taiwan. PRC representatives also signed a confidential Memorandum of Understanding (MOU) with the WHO Secretariat to enforce its claim. The MOU, later leaked, specified that Taiwan not be allowed to participate under the names “Taiwan” or the “ROC”; if Taiwan was invited, then the PRC must approve in advance all communications between the WHO and Taiwan, and all communications between the WHO and Taiwan must be conducted through contacts in China, not Taiwan. Confronted with this situation, Taiwanese health authorities chose to use U.S. Centers for Disease Control contacts to learn more about WHO information.⁶ Taiwan’s Ministry of Health and Welfare and its agency, the Centers for Disease Control, also realized they needed to assume more responsibility for enhanced prevention techniques for Taiwan when the next pandemic struck, ranging from travel quarantines to mask supplies and contact tracing. Post-SARS legislation ensured the legal basis for the creation of a Central Epidemic Command Center (CECC) if a potential pandemic seemed likely.

PRC determination to eventually absorb Taiwan and its strong political preferences regarding Taiwanese domestic politics were major factors in Beijing's especially rigid policies toward Taiwan during the SARS era. For at least the last 30 years, the PRC favored Kuomintang (KMT) rule for Taiwan in contrast to its major rival, the Democratic Progressive Party (DPP). The KMT is generally more conservative than the DPP, but more importantly, it is more amenable to business, political, and cultural ties with the PRC. The DPP has been most associated with a desire for formal independence from the PRC and has a disproportionately high number of supporters who trace their ancestry to minority groups in Taiwan and speak other versions of Chinese than Mandarin. Due to its strong historic ties to Taiwan, the DPP puts forward a more Taiwan-centric identity than the KMT. Chen Shui-bian, the first DPP politician to become president, was in office during SARS and was unacceptable to Beijing because of his generally pro-independence stance and his public contemplation on conducting a domestic referendum on a Taiwanese bid for WHO membership. This would have embarrassed the PRC,⁷ who was already under international scrutiny for then-Minister of Health Zhang Wengkang's March 2003 guarantee to the WHO that SARS "was well under control" and that the number of cases were declining.⁸ PRC leaders, facing a public relations nightmare, fired Zhang, enabled Taiwan to get assistance with masks, initiated some cross-straits contacts, and on May 5, 2003, the aforementioned WHA visit to Taiwan occurred.⁹

The PRC subsequently softened its position regarding Taiwan during President Ma Ying-jeou's 2008–2016 tenure on several issues, including Taiwan's participation in the WHO. Ma, a member of the KMT, made strengthening ties with China one of his key foreign policy priorities. In January 2009, with the consent of the PRC, the WHO invited Taiwan to establish a direct point of contact through the IHS treaty guidelines to exchange information on health issues, and a short time later, the WHO Director General invited "Chinese Taipei" to join WHA meetings as an observer. Even this more open policy was subject to Beijing's control. From 2009 to 2019, Taiwan applied to attend 187 WHO technical meetings as an observer, but due to Chinese vetoes were only allowed to attend 57 of them.¹⁰

In 2016, Tsai Ing-wen, a member of the DPP, won Taiwan's presidential election. A Hakka minority, veteran of DPP politics, and holder of four academic degrees including a PhD from the London School of Economics, Tsai's candidacy and the population's general discontent with Ma's overly pro-China policies managed to foster for the first time a DPP majority in the Legislative Yuan, the national legislature.¹¹ China reacted to the second DPP President by putting even more pressure on the international community to diminish Taiwan's influence and coupled this with an increase in military maneuvers to intimidate Taiwan.¹² The WHO and WHA without explanation no longer invited Taiwan to WHA

meetings.¹³ Throughout Tsai's presidency, China has lured away a number of Taiwan's diplomatic allies and has put immense pressure on the remaining 15 polities (14 nations and the Vatican).

In the latter part of President Tsai's first term, public opinion in Taiwan was affected by the perception that the KMT was too tied to the PRC and by China's increasing pressure on Hong Kong. She was reelected in January 2020 with a record number of votes, just as COVID-19 began to spread throughout Wuhan, China. The pandemic was well underway by Tsai's inauguration in May 2020, but despite more long-term Chinese pressure on Taiwan since the Cold War, Tsai's leadership was already strongly complementing the groundwork of Taiwan's government in reaction to SARS.

President Tsai was well connected with Taiwan's digitally savvy youth. In 2016, Tsai appointed Audrey Tang as Digital Minister. Tang, a junior high school dropout and child prodigy, was reading classical literature at age five, doing advanced mathematics at age six, and programming by age eight. By age 19, she held positions in software companies and worked in Silicon Valley as an entrepreneur. *Foreign Policy* in 2019 featured Tang, the youngest cabinet member in Taiwan's history, as one of the top global thinkers of the past decade.¹⁴ Tang's digital creativity and entrepreneurial/management abilities have been critical to Taiwan's success in battling the virus.

COVID-19's Emergence, China, WHO, and Taiwan

On December 31, 2019, Wuhan police announced they were investigating doctors for spreading unconfirmed rumors that threatened the social order while municipal officials released information about a viral pneumonia that infected customers in a seafood market. On the morning of the same day, Taiwan's deputy CDC director received a text message from a colleague in the media monitoring division regarding laboratory reports and warnings about an unusual viral pneumonia in Wuhan. The reports had been deleted within China, but were preserved on PPT, a Taiwanese bulletin board website. The same day, Taiwanese officials emailed their IHR point of contact and the U.S. CDC for more information about the disease but were unable to get satisfactory answers from either source about human-to-human transmission. According to Foreign Minister Joseph Wu, Taiwan's government immediately began performing health checks on inbound Wuhan flights the same night. Chinese officials promptly reported the disease through the WHO IHR point of contact, but the PRC and WHO claimed for well over two weeks that the disease was not contagious and there were no new cases. Xi Jinping later claimed he had initiated an inquiry and response team in the Politburo as early as January 7. During January, as cases were mounting, Wuhan hosted an annual People's Congress of the municipal branch of the Communist Party,

including an enormous public banquet of 40,000 families. During this time period, Wuhan officials detained more doctors for sharing warnings about the virus with scientists in Wuhan, Shanghai, and Beijing. Official denial ended on January 20, 2020 as China's most famous epidemiologist, Zhong Nanshan, announced on state television there was no doubt of human-to-human transmission.¹⁵

Taiwan reacted less than two weeks later on February 6 by imposing a mandatory self-quarantine requirement for Taiwan nationals who had traveled to China, Hong Kong, and Macao. The next day, foreign nationals who had been to the same places were temporarily barred from visiting Taiwan. As outbreaks occurred in other countries such as South Korea, Iran, and Italy, Taiwanese authorities used the same techniques, and on February 10, 2020, Taiwan only permitted flights originating in five Chinese airports to land in Taiwan.¹⁶ Currently, Taiwan's government requires almost all incoming travelers to quarantine in a hotel or apartment for a 14-day period upon arrival with strict monitoring by health officials.

On January 22, following a meeting with Beijing authorities, the WHO chose not to report the seriousness of the virus because of Chinese government resistance. On January 23, Wuhan was placed on quarantine, and by January 24, Hubei Province, which includes Wuhan, was locked down—right before the Lunar New Year holiday. The Chinese government quarantined 50 million people across 15 cities, suspended air travel from Hubei Province to other parts of China, and restricted air travel to major Chinese cities such as Beijing and Shanghai. Meanwhile, the PRC urged other nations to continue their international flights to China. By March 11, the WHO, after outbreaks in 114 countries and 4,291 deaths, finally officially declared COVID-19 a pandemic.

The WHO's excessive deference toward the PRC and the organization's negative comments regarding Taiwan—the WHO criticized Taiwan for restricting flights from China—in the critical first stages of the pandemic warrant further discussion. In the Xi Jinping era, the PRC became influential with the WHO in a way that far exceeded the MOU of the SARS days regarding Taiwan. China actively engaged in attempting to influence WHA member state votes through cultivating relationships with candidates for WHO Director-General, including supporting current Director-General Tedros Adhanom Ghebreyesus of Ethiopia. Confirmed in 2017, Dr. Tedros signed an MOU in support of China's Belt and Road Initiative and traveled to Beijing the same year in order to praise Xi's proposal to create a "medical silk road."¹⁷

Fighting COVID-19: Exceptional Technological Responses

Citizens of Western countries including the United States frequently distrust big tech companies like Google and Facebook over their handling of personal data and

the spread of misinformation online. This attitude has influenced how Americans have responded to the pandemic. In contrast, the trustful relationship in handling sensitive information between the Taiwanese public, the government, and open online platforms has been vital to Taiwan's handling of the pandemic.

Influenced by its experience with the SARS outbreak, and wary of the approaching Lunar New Year when millions of Chinese and Taiwanese travel, Taiwan's government implemented strict procedures based upon early warning data in January 2020 from resources such as Metabiota, an AI-based private health tech company that partners with industries and governments to manage potential epidemics. Metabiota predicted the coronavirus would spread to Taiwan and other East Asian nations. By January 20, the CECC was activated, and the next day, the first confirmed case of coronavirus was reported in Taiwan from a 50-year old woman who had recently traveled to Wuhan. Almost every Taiwanese citizen, approximately 99 percent, is registered for the National Health Insurance (NHI) program, Taiwan's government-run single-payer healthcare program. The NHI database is also integrated with Taiwan's customs and immigration database. On January 27, citizens' travel data was integrated with their NHI identification cards—a process that only took a single day. As a result, the CECC was able to quickly track citizens' recent travel history to determine which individuals were at high risk of infection and required quarantine. On January 30, the NHI database was expanded to include recent patients' information from China, Hong Kong, and Macao. By February 14, the Taiwanese government launched the Entry Quarantine System for foreigners to quickly provide contact information, recent travel history, and log any potential virus symptoms. Travelers to Taiwan could easily access the system's online forms through scanning a QR code on their mobile phones upon arrival in Taiwan.¹⁸

Taiwanese and foreigners evaluated to be low risk (no travel to high-risk areas, reported symptoms, or positive COVID tests) were sent a border declaration pass via SMS text message for easier travel. For those in high-risk groups, including those who recently traveled to countries under advisory warnings or who tested positive for COVID-19, a 14-day quarantine was mandatory. The government can track these individuals via their mobile phones which can be monitored via location-tracking. Authorities are alerted when quarantined individuals leave their homes or other designated shelter locations—and even when they turn off their devices. These individuals are also contacted twice a day to ensure they are adhering to quarantine protocols and authorities rapidly contact or visit individuals who trigger a warning alert, usually within 15 minutes.¹⁹

In addition to government-implemented policies, Taiwan's substantial tech-centric community made immense contributions to the distribution and management of vital supplies like face masks. In the years following the youth-

driven anti-KMT political protest “Sunflower Movement,” a growing community of idealistic, civic-minded programmers and hackers emerged in Taiwan, such as the decentralized, collaborative open source g0v community. These individuals seek to use technology for the public good, make government processes more transparent to citizens, and encourage more active participation in Taiwan’s democracy. To achieve these goals, programmers developed platforms, such as Co-Facts, an automated chatbot for LINE—the most popular messaging app in Taiwan—that responds when users attempt to send potential disinformation that has been verified as false, and vTaiwan, an online civil participation platform that enables Taiwanese citizens to interact closely with government officials and elicit public opinion on various issues.

By early February 2020, Taiwan faced a serious mask supply problem. The previous month, the government had announced an export ban on face masks (the ban was lifted in June). Users of LINE swarmed the platform posting information on stores’ inventories, but this information was difficult to keep track of as LINE is built for social interaction and not for accurately tracking inventory. A software engineer named Howard Wu quickly developed a website using Google Maps that was constantly updated with crowd-sourced reports coming in from LINE for a much more user-friendly way for Taiwanese to stay informed on available face mask supplies. This quickly proved to be untenable, not only because of the unreliability of crowd-sourced inventory data, but also because of the fees Google charges developers when a certain amount of users access Google Maps through a website or application.²⁰ It was then that Wu engaged with Taiwan’s “civic tech” community through a collaboration tool known as HackMD and caught the attention of Digital Minister Audrey Tang, the architect of vTaiwan and a strong advocate for open data and digital democracy.²¹

Tang met with President Tsai, already a strong proponent of using technology for civic good, to propose a solution to Taiwan’s looming face mask supply problem soon after Wu’s map exploded in popularity. Tang suggested that the government only distribute face masks through pharmacies associated with Taiwan’s NHI healthcare system. The NHI already maintained a database updated in real time of pharmacies’ available supplies, far more accurate than ad hoc crowd-sourced information. Furthermore, by tying mask distribution to users’ NHI identification cards, the government could prevent mask supply hoarding by individuals and enforce the mask ration system put in place by the government. The mask rationing system, in which individuals could purchase two masks per week, was implemented on February 3, 2020.²² Tang also proposed that the government make the NHI’s database open to the public allowing Tang and other civic-minded, tech savvy Taiwanese to build applications for users to access this information with ease.

Tang's proposals were quickly greenlit, and she made the NHI database available through a channel frequented by Taiwan's civic tech community via the communication platform Slack. Tang also built a web portal where Taiwanese could easily download applications created by Taiwanese developers to track face mask supplies based upon the NHI's real-time data.²³ With the sharing of the NHI's accurate data and the plethora of apps built around it, masks were evenly distributed to citizens throughout the country at pharmacies, and users could easily track inventory data preventing mass hysteria over potential supply shortages. The effort was so successful that Taiwan ended up with a massive surplus of face masks, which the government donated to other nations in need of masks as the pandemic spread worldwide. The strict mask rationing system was loosened as mask production increased. By July 2020, Taiwan had donated over 51 million masks worldwide to over 80 countries including the United States.²⁴

Taiwan and the World: A COVID-19 Success but a WHO Pariah

Taiwan's highly successful response to the virus has brought it more international attention than probably any time since the early stages of the Cold War. The Taiwanese government has not only aided many nations around the world by providing medical supplies and critical information, but it has also vigorously pursued soft diplomacy. Perhaps most noticeably, Taiwan has gathered more support for greater access and participation in the WHO and to strengthen informal bilateral ties. A quick visit to its Ministry of Foreign Affairs website includes an English language section titled "The Taiwan Model for Combatting COVID-19" which reads:

When a SARS-like virus, later named as coronavirus disease 2019 (COVID-19), first appeared in China in late 2019, it was predicted that, other than China, Taiwan would be one of the most affected countries, given its geographic proximity to and close people-to-people exchanges with China. Yet even as the disease continues to spread around the globe, Taiwan has been able to contain the pandemic and minimize its impact on people's daily lives. The transparency and honesty with which Taiwan has implemented prevention measures is a democratic model of excellence in fighting disease. This webpage shares the Taiwan Model for combating the pandemic, as well as links to related international media coverage and video clips. The materials found here also help explain the different aspects of Taiwan's epidemic prevention work, and how Taiwan is helping the international community.²⁵

Despite the support of a number of countries, there is no substantial evidence that the majority of WHA member states will accept Taiwan's participation at this

time; China's opposition is simply too difficult to overcome. This is evidenced by Taiwan's exclusion from the May and November 2020 WHA meetings despite the strong international support. Nevertheless, limiting Taiwan's engagement with the international health community certainly does not improve the prospects for better global health.

Notes

¹ "Bill Gates: Pandemic is 'Nightmare Scenario,' but National Response Can Reduce Casualties," *Fox News*, April 5, 2020, <https://www.foxnews.com/politics/bill-gates-pandemic-is-nightmare-scenario-but-national-response-can-reduce-casualties>; Riyaz ul Khaliq, "Taiwan's SARS Experience Helped It Beat COVID-19," *Anadolu Agency*, June 5, 2020, <https://www.aa.com.tr/en/asia-pacific/-taiwan-s-sars-experience-helped-it-beat-covid-19-/1830547#!>; Dave Makichuk, "Bill Gates Lauds Taiwan's Coronavirus Response," *Asia Times*, April 7, 2020, <https://asiatimes.com/2020/04/bill-gates-lauds-taiwans-coronavirus-response/>.

² Chao Deng, "Taiwan Shrugs Off Pandemic to Deliver Surprise Growth," *The Wall Street Journal*, October 30, 2020, <https://www.wsj.com/articles/taiwan-shrugs-off-pandemic-to-deliver-surprise-growth-11604063439>.

³ Ian Rowen, "Crafting the Taiwan Model for COVID-19: An Exceptional State in Pandemic Territory," *The Asia-Pacific Journal* 18, issue 14, no. 9 (2020): 2.

⁴ Eleanor Albert, "China-Taiwan Relations," *Council on Foreign Relations*, last modified January 22, 2020, <https://www.cfr.org/backgrounder/china-taiwan-relations>.

⁵ Yu-Jie Chen and Jerome A. Cohen, "Why Does the WHO Exclude Taiwan?," *Council on Foreign Relations*, April 9, 2020, <https://www.cfr.org/in-brief/why-does-who-exclude-taiwan>.

⁶ Rowen, 2-3.

⁷ Jacques DeLisle, "Taiwan and the WHO in 2020: A Novel and Viral Politics," *Foreign Policy Research Institute*, May 13, 2020, <https://www.fpri.org/article/2020/05/taiwan-and-the-who-in-2020-a-novel-virus-and-viral-politics/>.

⁸ Simon Shen, "The 'SARS Diplomacy' of Beijing and Taipei: Competition Between the Chinese and Non-Chinese Orbits," *Asian Perspective* 28, no. 1 (2004): 45-47. Accessed November 6, 2020, <http://www.jstor.org/stable/42704443>.

⁹ *Ibid.*, 49-50.

¹⁰ Thomas Shattuck, "The Streisand Effect Gets Geopolitical: China's (Unintended) Amplification of Taiwan," *Foreign Policy Research Institute*, April 14, 2020, <https://www.fpri.org/article/2020/04/the-streisand-effect-gets-geopolitical-chinas-unintended-amplification-of-taiwan/>

¹¹ John Franklin Copper, *Taiwan: Nation-State or Province?*, 7th Edition (New York and London: Routledge, 2019), 84-85.

¹² Lucien Ellington meetings with General Shen Yi-ming, Vice-Minister for Policy, Ministry of National Defense, and David Tawei Lee, Secretary-General, National Security Council, June 4, 2019.

¹³ Rowen, 3.

¹⁴ Jonathan Tepperman, “Readers’ Choices: A Decade of Global Thinkers,” *Foreign Policy*, 2019, <https://foreignpolicy.com/2019-global-thinkers/>.

¹⁵ Rowen, 1–4.

¹⁶ Ankit Panda, “Amid Coronavirus Concerns, Taiwan Takes Measures to Restrict Travel From China,” *The Diplomat*, March 3, 2020, <https://thediplomat.com/2020/03/amid-coronavirus-concerns-taiwan-takes-measures-to-restrict-travel-from-china/>.

¹⁷ Rowen, 3.

¹⁸ C. Jason Wang et al., “Response to COVID-19 in Taiwan: Big Data Analytics, New Technology, and Proactive Testing,” *Journal of the American Medical Association* 323. No. 14 (2020): 1341–1342.

¹⁹ Dominykas Broga, “How Taiwan Used Tech to Fight COVID-19,” *Tech UK*, March 31, 2020, <https://tinyurl.com/y4umo8mq>; Anna Novikova, “Software in the Time of Plague: How Innovations Help Mitigate COVID-19 and Other Disease Outbreaks,” *Intersog*, March 18, 2020, <https://tinyurl.com/y5sbbwv2>.

²⁰ Google would remove fees associated with Google Maps’ use later in the year in response to the pandemic.

²¹ Andrew Leonard, “How Taiwan’s Unlikely Digital Minister Hacked the Pandemic,” *WIRED*, July 23, 2020, <https://tinyurl.com/y3chvq9e>.

²² Cho-Hung Chiang et al., “Maintaining Mask Stockpiles in the COVID-19 Pandemic: Taiwan as a Learning Model,” *Infect Control Hosp Epidemiol*, May 11, 2020, 1–2.

²³ See <https://mask.pdis.nat.gov.tw/>.

²⁴ Jay Chen, “Taiwan Donates Over 51 Million Masks to Countries Worldwide,” *BusinessWire*, July 22, 2020, <https://tinyurl.com/y6cgn2ef>.

²⁵ Taiwan Ministry of Foreign Affairs, “The Taiwan Model for Combating COVID-19,” accessed November 6, 2020, <https://tinyurl.com/y4kzcxx2>.